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IMAGING AND DIAGNOSTIC TESTING

SINGLE PHOTON EMISSION COMPUTED TOMOGRAPHY MYOCARDIAL PERFUSION IMAGING IN VERY ELDERLY PATIENTS ? 80 YEARS WITHOUT KNOWN CORONARY ARTERY DISEASE PROVIDES IMPORTANT CARDIAC RISK STRATIFICATION

ACC Poster Contributions
Ernest N. Morial Convention Center, Hall F
Sunday, April 03, 2011, 3:30 p.m.-4:45 p.m.

Session Title: Radionuclide Imaging: Risk Stratification
Abstract Category: 39. Nuclear Cardiology/PET
Session-Poster Board Number: 1063-227

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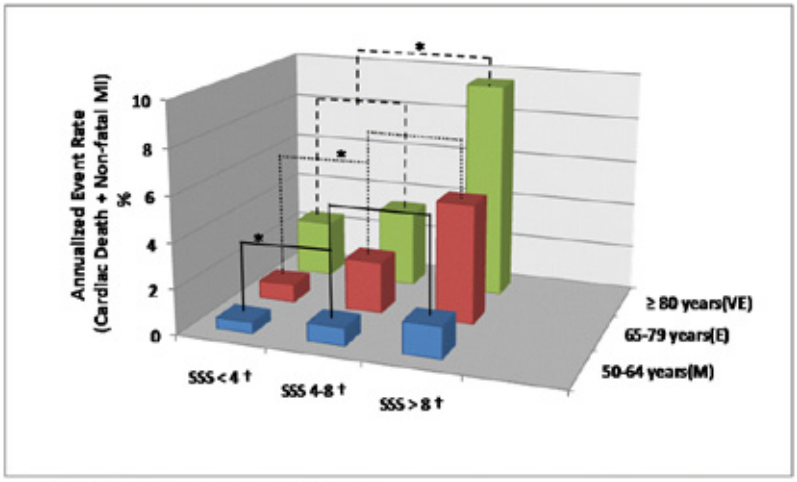
Background: As the population ages, cardiac risk stratification in the very elderly is an ongoing concern. We evaluated SPECT MPI in patients ≥ 80 years without known coronary artery disease (CAD) in comparison to younger patients.

Methods: Prospectively collected data from 8864 patients {1093 patients ≥ 80 years(VE), 3369 patients 65 - 79 years(E) and 4402 patients 50 - 64 years(M)} without known CAD who underwent exercise and /or pharmacologic stress testing with SPECT MPI between 1996 and 2005 were analyzed. Utilizing ASNC 17-segment model, Summed Stress Scores (SSS) were recorded as < 4, 4-8 and > 8 respectively. SPECT MPI data, cardiac event (cardiac death or non-fatal myocardial infarction) rates and referral for early (≤ 60 days) cardiac catheterization (ECC) and revascularization (ERV) in VE patients were compared to that of E and M patients. Mean follow-up for cardiac events was 1.94 ± 0.9 years.

Results: In VE patients, SSS was significantly associated with cardiac events as well as referral for ECC and ERV (P < 0.001). SSS and/or Summed Difference Score were independent predictors of subsequent cardiac events and early intervention in VE patients (P < 0.001). In all categories of SSS, VE patients had higher cardiac event rates (Figure 1) but lower referrals for ECC and ERV as compared to E and M patients (P < 0.001).

Conclusions: Despite a higher risk for adverse cardiac outcomes in patients ≥ 80 years without known CAD, SPECT MPI is an effective tool in the noninvasive cardiovascular evaluation of such patients.

Figure 1. Cardiac events by categories of SPECT MPI results.



† P < 0.05 between M, E and VE groups
* P <0.001 between categories of Summed Stress Scores